Bay Area Air Quality Management District
Risk Screening Assessment, A# 10574
Classic Residence By Hyatt, P# 16345
November 1, 2004

This document describes the basis for the health risk screening assessment prepared for Classic Residence by Hyatt, located at 600/620 Sand Hill Road in Palo Alto California. This facility wishes to operate two new emergency standby generator sets diesel. In order to do this, the facility must get a permit from the Bay Area Air Quality Management District (BAAQMD). The BAAQMD, as a routine part of the evaluation of a permit application, prepared this screening risk assessment.

Particulates from diesel engine exhaust, a toxic air contaminant and a carcinogen, will be emitted during the operation of the engine. BAAQMD staff evaluates the possible impact of the diesel exhaust particulate emissions that will occur during routine operation of the diesel engines. The diesel exhaust particulate impact is expressed in terms of the increased risk of contracting cancer by individuals who live or work near the proposed engine.

The estimated increase in diesel exhaust particulate emissions that can be expected from these sources are 10.70 pounds per year. Ambient air concentrations of diesel exhaust particulate were predicted using the ISCST3 air dispersion computer model. This model uses information about the facility and the emission rates of toxic air contaminants to estimate what concentrations would be expected in the air at various locations around the site. The estimated concentrations of diesel exhaust particulate are used to calculate the possible cancer and noncancer health risk that might be expected to arise from this exposure.

The potential cancer risk was calculated using standard risk assessment methodology. For residents, they include the assumptions that exposures are continuous for 24 hours per day, 7 days per week for 70-years. For students, the assumptions include higher breathing rates for children and that exposures are for 36 weeks per year over a 9-year period. The cancer risk is based on the "best estimates" of plausible cancer potencies as determined by the California Office of Environmental Health Hazard Assessment (OEHHA). The actual cancer risk, which cannot be determined, may approach zero. This type of analysis is considered to be health-protective.

The potential for noncancer health effects is evaluated by comparing the long-term exposure level to a Reference Exposure Level (REL). A REL is a concentration level at or below which no adverse health effects are anticipated. RELs are designed to protect sensitive individuals within the population. Comparisons to RELs are made by determining the hazard index, which is the ratio of the estimated exposure level to the REL.

The proposed operation would result in an increased maximum cancer risk of 6.55 chances in a million and a hazard index of 0.0066 for off-site workers near the facility. For the residents, the increased maximum cancer risk is 10 chances in a million and the hazard index is 0.0066. For students who attend the CHC-Esther B Clark School, the increased maximum cancer risk is 0.75 chances in a million and the hazard index is 0.0028. These health risk values, presented in the table below, meet the criteria for acceptable levels established in the BAAQMD's Risk Management Policy.

Health Risk Results		
Receptor	Increased Maximum Cancer Risk	Hazard Index
Off-Site worker	6.55 chances in a million	0.0066
Residential	10.0 chances in a million	0.0066
The CHC- Esther B Clark School	0.75 chances in a million	0.0028

School address: The Children's Health Council
The Esther B. Clark School
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